

User Support Programs and Technical Upgrades



SAC Meeting February 10,
2012

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User Support Programs

Assisted Data
Collection

RemoteAccess

proteinXpress

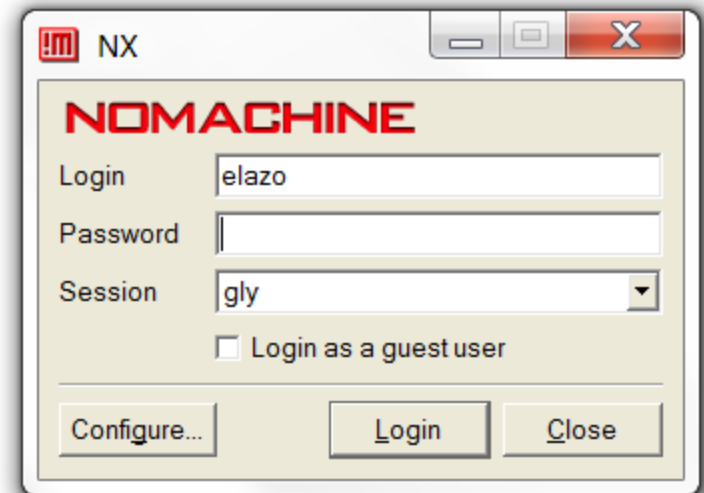
RemoteAccess

- Users can control beam line from their home lab or their homes.

Click to edit Master text styles
Second level
Third level
Fourth level
Fifth level



- What is needed for remote access:
 - RSA token
 - NoMachine

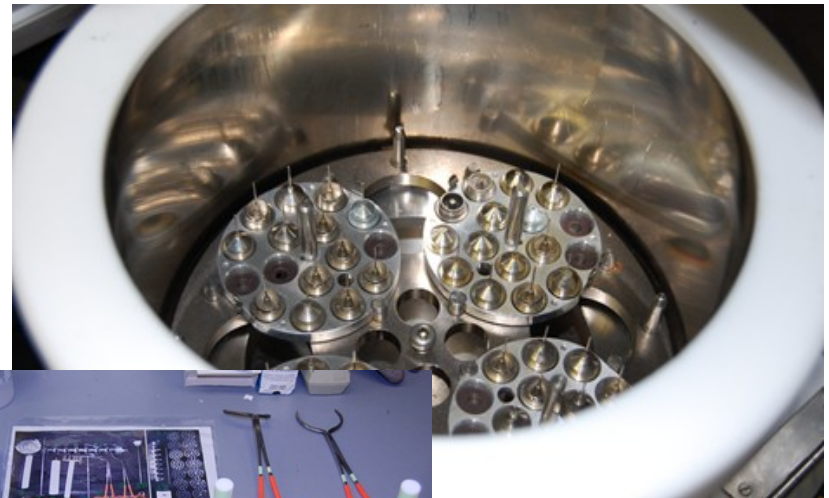
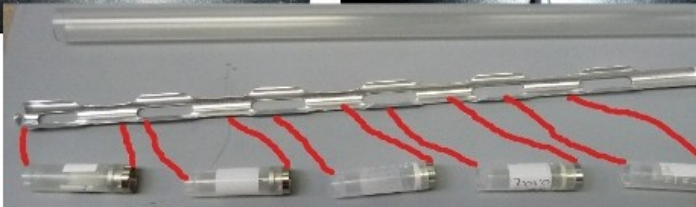
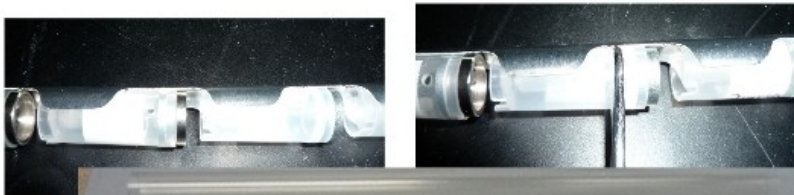


<http://www.bnl.gov/cybersecurity/rsa/>

proteinXpress

- Users send their samples and select the optimal samples for data collection. Data is sent to the user.
- proteinXpress has been used 13 times this year.

5 vials per cane, properly spaced to allow easy access with clamp and easy removal



Technical Upgrades

- Gripper Claw Changed
- New Computer Rack Installed
- Fluorescence Detector
- YAG
- Camera
- Automated Beam-stop & Annealing

Gripper Collets Changed

- To reduce ice formation, the gripper collets were changed.
- The new coated collets were changed during the May shutdown.
- Duty cycle < 20 seconds
- Auto-mounter screens 64 samples in 2 hours.

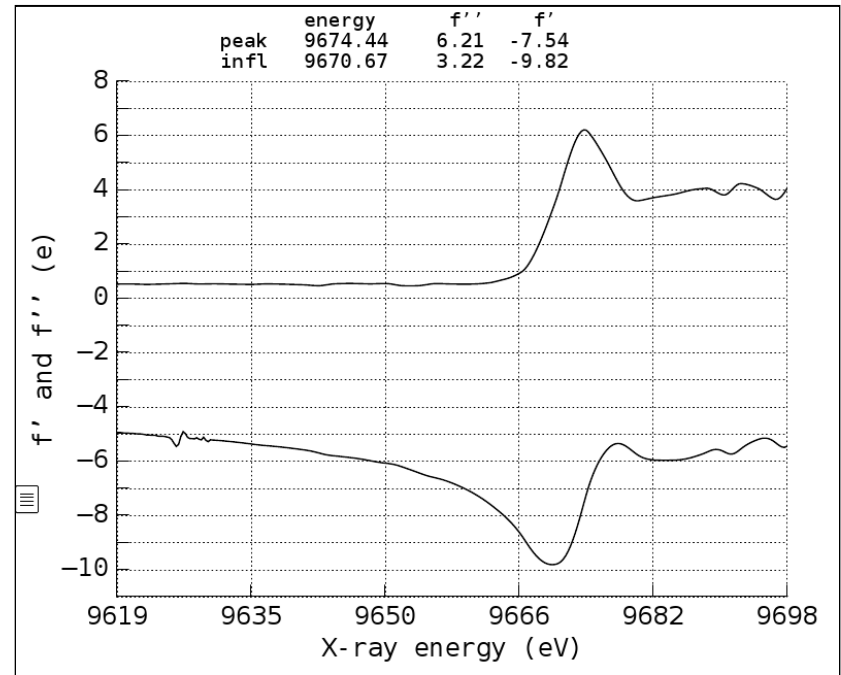
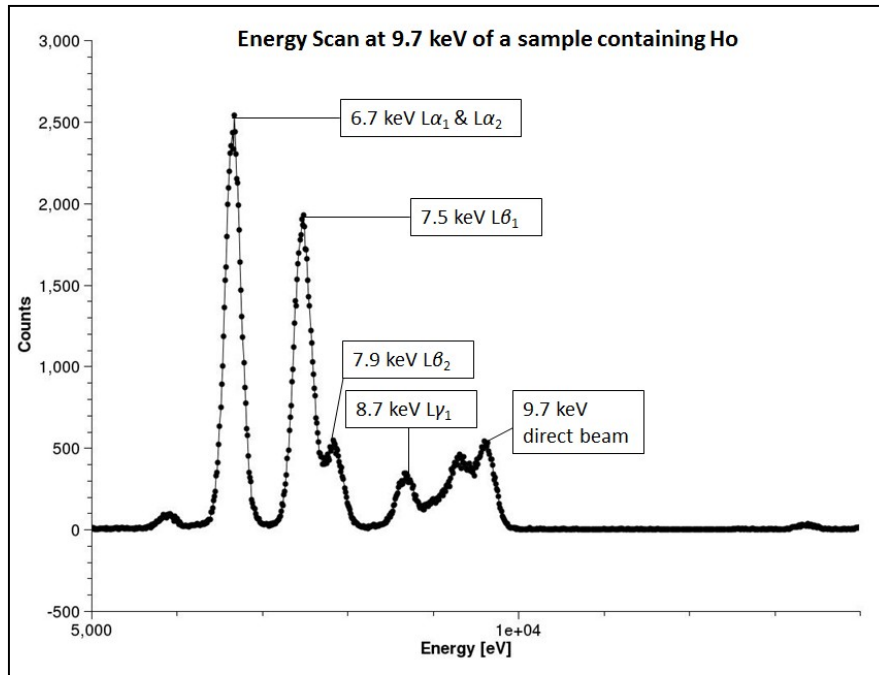


New Computer Rack Installed

- During the December 2011 shut down a new computer rack was implemented.
- Will help prevent data lost.
- Future installation: new UPS and new computer was purchased.



Fluorescence Detector



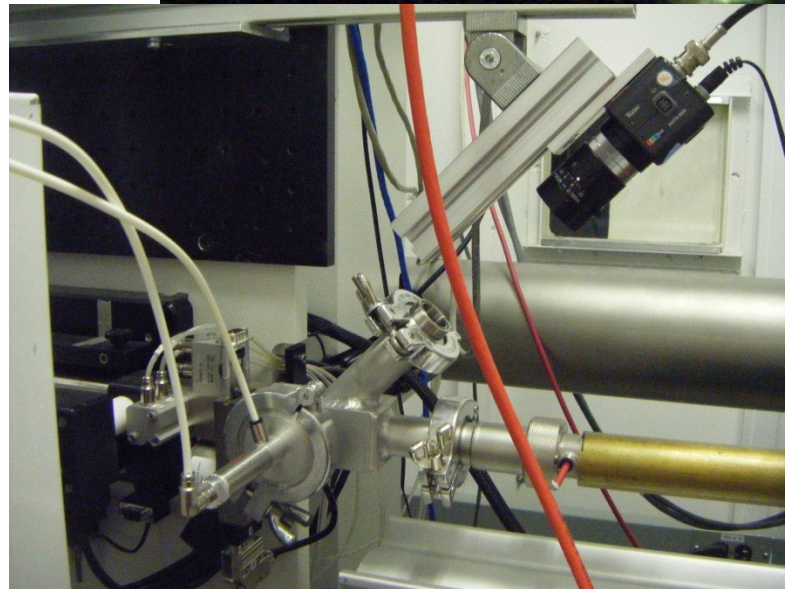
Excitation Scan at 9.7 keV of a sample containing Ho.

Energy Scan of a sample containing Zn.

A cone shape window still needs to be implemented.

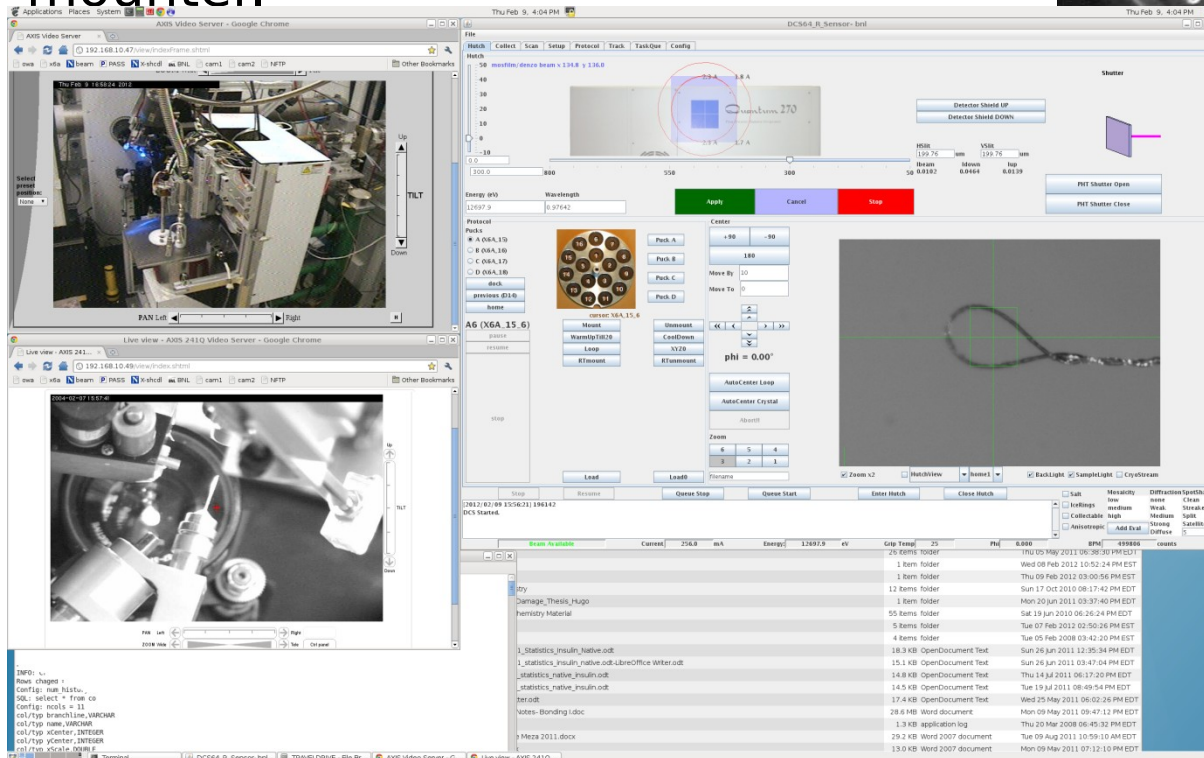
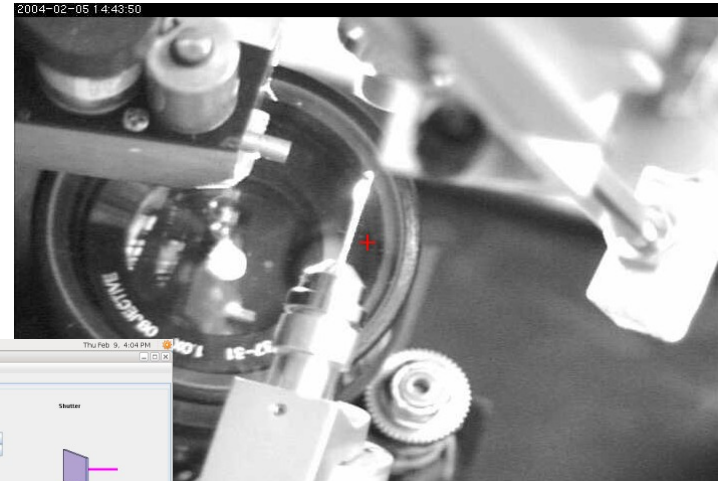
YAG

A 20 micron thick YAG (Yttrium aluminum garnet) crystal was installed. It allows the beam to be viewed before its enters the diffractometer.



Sample Viewing Camera

A new camera was placed inside the hutch to view the sample environment. This was installed to aid in operating the auto-mounter.



Typical
screen shot
of how one
would
operate
auto-
mounter.

Automated Beam-stop & Annealing

- Annealing device (EMBL design) needs to be commissioned
- Automated beam-stop, back stop needs to be welded on.



Summary

➤ User Support

RemoteAccess

proteinXpress

➤ Technical Upgrades

- Fluorescence Detector
- YAG
- Camera
- Maintenance Gripper, Computers

➤ Future Commissioning

- Automated Beam-stop
- Annealing Device

Thank You for Attention